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FULL PAPER

Consumer perception and satisfaction for durian taste among the Chinese consumer: Malaysia vs Thailand durian

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Abstract

China is the largest importer of durian globally, with a market share of 65% in 2018. Malaysia is one of the durian exporters to China (4%) after Thailand (95%). Parallelly to the population growth, demand for durian in China increased from 677 thousand Mt (2018) to 878 thousand Mt (2019), with an increase of 51.9% per year. Besides health benefits, durian is becoming more popular with Chinese consumers as souvenirs or corporate gifts. A study on consumer perception and satisfaction between Malaysian durian and Thailand durian was conducted among Chinese consumers in Shenzen, Guangzhou and Beijing in China. Findings showed that 95.2% liked Malaysian durian (*Musang King* or *Mao Shan Wang*) than Thailand durian (*Monthong*). An 80 % of respondents buy durian five times and more a year, with 20.38% of them spending more than ¥100 (the approximate US $15) for every purchase. The preferable buying place is in supermarkets and hypermarkets (50.8%). The Chi-square test identified a significant difference between age, occupation, income, and family members ($p<0.05$) to quality and premium perception. In this situation, the *Mao Shan Wang* durian was marketed to be a premium product. These findings are essential to promote and increase the demand, particularly for Malaysian durian. Thus, Malaysia needs to increase durian production and market strategy to meet global expectations, including China's market of 4.2 million Mt by 2030.

1. Introduction

Studying consumer behaviour is important to help marketers to understand consumers' buying decisions. Consumer preferences are never simple, they may respond to influences that change their mind at the last minute (Anojan and Subaskaran, 2015). The nature of being market-oriented requires the organization to consider who their best purchasers might be, where they are, how to target them and with what and an important starting point to understand what it is they really 'want' (Wann, 2001; Hollebeek *et al.*, 2007; Varela *et al.*, 2009). Consumers' attitude and response towards such cues may be modified by certain inherent characteristics such as stimuli (immediate response to light, colour, odour, texture, and sound) (Madichie, 2012) and personal attitude (level of category knowledge or income level) (Kumar, 1987). Other than that, the consumer has also been influenced by underlying preferences such as popular trends, level of received education, and personal taste (Burnett *et al.*, 2016), country of origin and branding since it is more attractive to young consumers (Kazmi, 2012). For a consumer to be satisfied with the product and marketing, the information provided needs to be convincing and valuable and needs to give people a level of convenience that cannot be received from other competing sources of information (Liu and Wang, 2019). Beyond subjectivity, value and customer satisfaction constantly shift and shape new ways (Quintana, 2018).

With the changes in taste and experience, durian gains its popularity across the country. Durian is often referred to as the King of Fruit by people in Southeast Asia. Despite the pungent smell, and stinky with prickly skin, durian is extremely healthy, contains iron, vitamin

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C and potassium. Some believed durian could improve muscle strength, skin health and even lower blood pressure. However, it is important not to eat them in excess (Gosh, 2018). Thailand is the world's biggest producer, followed by Malaysia and Indonesia. Durian is categorized under seasonal fruits, and usually, peak produces between June and July for Malaysia and Thailand and October to February for Indonesia. Other months are considered low season with the fewest production.

Durian is sold worldwide, though consumption remains centred in Singapore, Malaysia, Thailand, Vietnam, Cambodia, Myanmar, Indonesia, the Philippines, Taiwan, and China. Figure 1 shows global durian importers, which are dominated by China (62%), followed by Vietnam (24%), Hong Kong (10%), Singapore (2%) and other countries (2%). The China market has long been known for its strong demand for the durian market. Since the 1970s, Thailand has been supplying China (by sea) with fresh durian, indicating a virtual monopoly on China's durian consumption. The bulk of these fresh durian imports enters via the southern port cities of Hong Kong and Shenzhen before being sold up the supply chain to distributors, wholesalers, and retailers in the major markets of Guangzhou, Xiamen, Beijing, and Shanghai (ChinaAg, 2017). Import China has risen significantly over the five years past, up to 41% annually from the US $ 693 million (2016) to the US $ 1.6 billion (2019). China accounts for 60-80% of global imports annually to meet the local demand. However, from 2015 to 2017, China's import market for fresh durian depicted a declining trend, dropping from 628, 306 Mt to 445, 762 Mt (Table 1). This decline is due to many factors, including China's weakening currency and decreased output in key durian production areas (ChinaAg, 2017). In May 2015, Thailand reported a durian shortfall in Chanthaburi, Rayong, and Trat provinces due to poor weather (drought) conditions (China Daily, 2015). To counter this, in August 2015, the People's Bank of China (PBC) devalued the yuan (CNY) by -4.6% (USD/CNY). The devaluation was designed in part to aid export-oriented industries by making their goods cheaper to sell overseas. However, the depreciation increased the relative price of agricultural imports such as durian, meaning the cost of doing business went up across the supply chain. Starting from 2018 onwards, the import trend increased significantly at an average growth rate of 51.9%, from 677,043 Mt to 878,270 Mt in 2019. Malaysian durian, primarily of the "*Musang King*" or "*Mao Shan Wang*" variety, while Thailand with "*Monthong*" or "*Golden Pillow*" and "*Chanee*". Besides health benefits, durian is also accepted as a souvenir or corporate gift among the Chinese. The new trend shows, the demand for food-based increased continuously. Products such as durian ice cream, moon cakes, and dumplings are sold widely made commercially or homemade (ChinaAg, 2017). According to the MK Durian Harvest (2020), Chinese consumption of durian is currently only 0.21 Kg per capita and is expected to reach up to 1.1 Kg per capita in 2030, while the long-term expectation of 3 Kg to be in line with Singapore, Taipei, and Hong Kong (Figure 2).

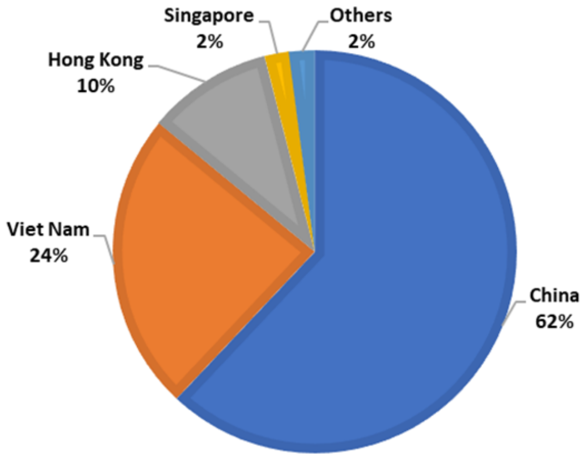

Figure 1. Global durian importers. Source: International Trade Centre (2020).

Table 1. China Imports of Durian, 2015-2019

Year	Metric Tonnes	US $ ('000)	Average Growth Rate (%)
2015	628,306.19	892.56	-7.1
2016	611,226.17	1,096.59	-2.7
2017	445,762.95	847.82	-27.1
2018	677,043.41	1,447.12	51.9
2019	878,270.16	2,086.16	29.7

Source: International Trade Centre (2020)

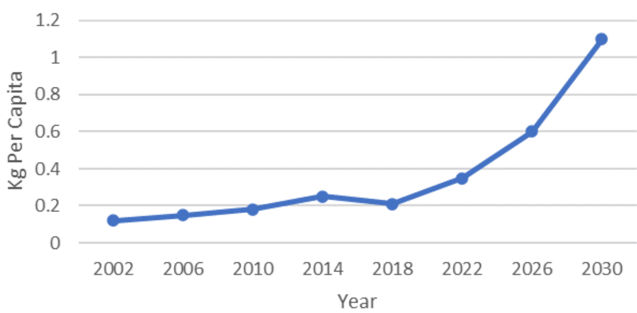

Figure 2. Chinese Forecasting Consumption Per Capita. Source: MK Durian Harvest (2020)

In May 2008, Malaysia started a move to be part of the durian supplier to China. An export protocol of frozen durian pulp and paste was signed, and export officially began on the 11th May 2011 onwards (Safari *et al*, 2021; Federal Agricultural Marketing Authority 2014). Malaysia again expanded the market by securing another export protocol for frozen whole fruit durian (also known as cryogenic durian) to China on 20th August 2018. Finally, though, export started in 2019 upon approval and premise auditing by the General

Administration of Customs of the People's Republic of China (GACC). The cryogenic durian is proposed for use as it is one of the best techniques to supply and preserve the quality of durians all year round. Through freezing, the excess durian during peak season can be controlled and supplied during the off-season. Furthermore, durian's pungent aroma can be concealed along the supply chain (Safari *et al.*, 2021).

Chinese consumption of durian remains robust and is expected to rise significantly over time. According to industry specialists, it is expected to grow Chinese consumer preference for quality durian and premium fruit. In a way to strengthen the Malaysian durian position and Chinese consumers' satisfaction, there is a need to look at consumers' buying intentions Therefore, the consumer's perception and satisfaction study towards Malaysian and Thailand durian were conducted. This study aims to evaluate the comparison in taste and perception of two different durians among Chinese consumers. This study will help provide some inputs to those involved in the industry to penetrate China's durian market.

2. Methodology

This study involved the collection of primary as well as secondary data. The primary data were collected via interviews from 19th July 2019 and ended on 15th August 2019. Structured questionnaires compatible with computerization were used in the study. A total of 230 respondents were involved from three places: Shenzen, Beijing and Guangzhou. Respondent has given three durian samples to access perception and preference Malaysian (*Musang King* frozen whole and pulp) and Thailand (*Monthong* fresh) durian. In the first place, Malaysian frozen durian thawed at room temperature for about 2.5 - 3 hours with an assisted fan to speed up the process (frozen pulp only requires half of the time) until the fruits can be opened easily. In the meantime, another sample of the Thailand durian is freshly bought in the market and ready to eat.

Despite that, secondary data was collected through various sources (e.g. Trade Map, UNCOMTRADE), annual reports published by the Department of Agriculture (DOA) Malaysia, Ministry of Agriculture and Food Industries (MAFI) or formerly known as the Ministry of Agriculture and Agro-based Industry (MOA), Ministry of Agriculture of the Republic of China, and other literature reviews.

The descriptive and inferential statistics of the Chi-Square test determine consumer preference for Malaysian and Thailand durian. Three variables of consumer experience in the purchase, spending and place to buy were analysed using a percentage score. Meanwhile, the same descriptive approach with a Chi-Square test indicates the preference towards durian samples using the Likert Scaling Method on a 5-point continuum weight 1,2,3,4 and 5. In this test, consumer needs to express their preference for the flesh attribute like size and shape, taste, colour, freshness, aroma, texture, presentation, types of packaging and labelling. The 5-point continuum weighs five categories of responses: 1) Very poor, 2) Poor, 3) Fair 4) Good and 5) Excellent good, respectively. However, since frequency occurrence in the same cells was less than 5, group 1 combined with group 2 while group 4 with 5 came out with three categories of responses: 1.0 – 2.0) Poor, 2.1-3.0) Fair, and 3.1-5.0) Excellent. These points are assigned where the positive direction of weighting is determined by the degree of preference of the fruit types. Despite another analysis, the Chi-Square test was used to identify any relationship between categorical variables and the perception of Malaysian durian.

3. Result and discussion

3.1 Profile of respondents

Primary surveys were conducted on 230 respondents involved in the study, the distribution of respondents by area is presented in Table 2. Descriptive analysis was used to discuss the results of the socio-economic profile of the respondents such as gender, age, occupation, education, income level and family members as presented in Table 3.

Table 2. The distribution of respondents by provinces and place of survey

Places	Survey Location	No. of
Shenzen	• Zhen Yin Yuen Xing Frozen	85
Beijing	• Parkson, Financial Street	50
	• Malaysian Embassy	35
Guangzhou	• Guangdong 21st Century	60
	Total	230

Gender is an important social category relevant for decision-making behaviour, where it determines individuals' motives, perspectives, rationales, and considerations. 54% of the respondents involved in the survey were female, and the rest were males (46%). The gender of the respondents balanced for both, possibly due to the preferred location arranged by the Agriculture Councilor's Office of China. Hence, early planning is important because it involves durian handling, where it is practically forbidden to bring in some places. 40.4% of the respondents were between 25-35 years of age, while 29.5% were 36-45 years, 13.2% were 46-55 years and the remaining below 10% for aged below 24 and more than 56 years old. Those above 45 years were considered the 'older' generation, and those 45 years and below were considered the 'younger' generations. The result showed that more respondents, 77.7% in the younger category. More than 70% of respondents were employed either as a worker or doing business. While 21% were unemployed and 3% were students. They are not working probably because of housewives or retired people.

Table 3. Summary of Socio-economic variable of the respondents (n = 230)

Variables	Percentage by categories
Gender	Female = 54.0% Male = 46.0%
Age	<24 years old = 7.8% 25-35 years old = 40.4% 36-45 years old = 29.5% 46-55 years old = 13.2% >56 years old = 9.1%
Education	Primary School = 32.6% Secondary School = 33.9% Upper Education =33.5%
Occupation	Employed = 76.0% Self Employed = 21.0% Student = 3.0%
Individual monthly income (¥ CNY)	<¥ CNY 2,000 = 9.1% ¥ CNY 2,001- 4,000 = 19.1% ¥ CNY 4,001-6,000 = 25.2% ¥ CNY 6,001-8,000 = 8.7% ¥ CNY 8,001-10,000 = 14.4% >¥ CNY 10,000 = 23.5%
Household monthly income (¥ CNY)	<¥ CNY 10,000 = 17.4% ¥ CNY 10,001-20,000 = 32.2% ¥ CNY 20,001-30,000 = 16.9% ¥ CNY 30,001-40,000 = 12.2% ¥ CNY 40,001-50,000 = 11.3% >¥ CNY 50,000 = 10.0%
Family members	1-4 = 77.4% 5-6 = 15.0% 7-8 = 4.1% >8 = 3.6%

The majority of respondents had gone through at least primary levels of education, 32.6%. Other, 33.9% had secondary and 33.5% at a higher level. However, the level of education might not have influenced the buying decision since most of them were employed and had the income to consume the durian. Monthly income is divided into two groups: individual and household income. The income per individual is calculated for him or her, while household income is the combination of both or single earnings. Results show personal monthly income between ¥ CNY 4,001-6,000 and more than ¥ CNY 10,000 does not show a significant difference (25.2%) and (23.5%). Meanwhile, monthly household income shows that the majority (32.2%) is in the range of ¥ CNY 10,001 to 20,000. Logically, the accumulation of both husband and wife for cumulative earnings in a month is in that range. While an individual income is more than ¥ CNY 10,000, probably a breadwinner person. About 77.4% was a small family with 1-4 members, 19.1% were medium-sized families having 5-8 family members each, and 3.6% were large families with family members of 8 and more. The number of family members may influence the buying purchase of the household to buy durian since it could provide enough income to buy the fruit as it is a premium price.

3.2 Frequency of consumption and spending

Figure 3 shows that more than 80% of the respondents indicated having experience in consuming five times and more durian in a year (Figure 3). On average, all respondents would say they had taken durian in a year, while a small amount of 1.6% had never taken durian. Furthermore, based on personal interviews, some respondents take durian more than twenty times a year. This finding is not surprising because it has been known that Chinese consumers have liked to eat durian for the past 20 years. There is no doubt, however, that the potential market is still vast since the Chinese economic condition has increased rapidly and impacted largely the purchasing power is averagely increased (Wu, 2017). Other than eating on their own, Chinese consumers purchase the fruits as a gift for families, friends and business associates (Chris, 2020).

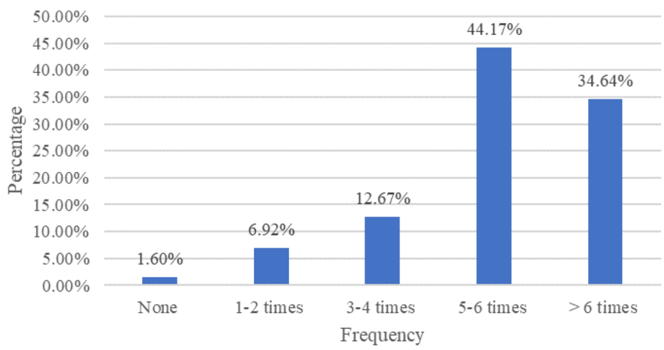

Figure 3. Frequency of Purchase

Figure 4 shows the amount expended durian per purchase by the Chinese respondents. The highest spending (20.38%) for each purchase of durian is around ¥ CNY 100 (the approximate US $ 15), followed by ¥ CNY 200 (US $ 32) (10.38%), ¥ CNY 500 (US $ 80) (7.69%) and ¥ CNY 50 (US $ 8) (7.31%) respectively. The estimated price is mainly based on their experience buying Thailand's durian weighing around 3-4 Kg per fruit with a price of ¥ CNY 25- 30 (US $ 4-5)/Kg. Generally, Thai durian price is lower (20-30% cheaper) than Malaysian durian, where the price for Malaysian Durian is usually at the rate of ¥ CNY 100-150 (US $ 16-24) /Kg or ¥ CNY 200-300 (US $ 32- 50) per fruit (weighing around 1.5 to 2.0 Kg). Nevertheless, this finding indicates that even though the price is more than ¥ CNY 200 (US $ 32), it found that about 29% of respondents had experienced buying it as a one-time purchase. This indicates that Chinese consumers spend a lot of money on every durian purchase, particularly young consumers (45 years old and below). The demand trend boosted, as such in 2019, Chinese consumers snapped up 80,000 durians in just 60 seconds on Alibaba flash sale on its retail site, Tmall (Derrick and Du, 2019). Their interest is not limited to fresh durian, there is also durian-flavoured likes ice cream, coffee, cakes, pastry, durian and lollies, even there is a durian Halloween mask on market. Big western chains in Asia have taken note, too, with McDonald's serving McFlurrys ice cream, hotcakes, and durian pizza in diversifying market segments (Robert, 2018).

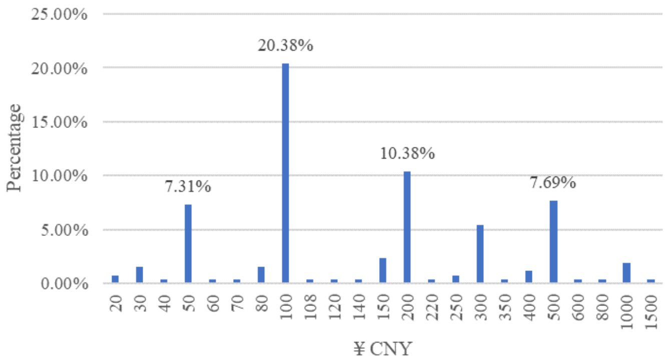

Figure 4. Spending per Purchase

3.3 Place of Purchase

The place is of the utmost importance and made conveniently available for the consumers, at the right product and at the right time. Traditionally, durian has been in the China market for long years and was well-accepted everywhere, even in the airport. Results in Figure 5 depicted those supermarkets and hypermarkets are the primary places for buying durian (50.8%), followed by wholesale markets (16.4%), farmer's markets (12.6%) and retail stores (10.0%). According to Daxueconsulting's (2019) report, supermarkets and hypermarkets in China are becoming more and more prevalent, particularly in densely populated areas. It provides a full range of products, including grocery lines and general merchandise. Based on observation, most hypermarkets, and supermarkets such as Wal-Mart, Carrefour, Tesco, Parkson, Lotus, Tian Hong and Ole Supermarket sell fresh and frozen durian. Other than being a convenient place to buy, supermarkets and hypermarkets are considered a phytosanitary situation. It simultaneously will influence the consumer's motivation to purchase or not. The remaining place (less than 5%) could consider an unusual place for selling and buying durian in China. The wet market is more focused on fresh groceries like meat and vegetable and night market for cooked food. Roadside fruit sales are rarely found in urban areas and may locate on the outskirts of the city. The very rapid development of online shopping in China has improved the place of purchase from physical stores to online. Commercial China online company like JD.com, Alibaba and Taobao shows a record of millions of Yen transaction each year. To further warm up the marketing, a special promotion is designed like Super Durian Day, Online Flash Sale, Alibaba's 8.18 Shopping Festival which impacted sales 30% higher than the previous year's sale. JD.com reported overall transaction volume for durian grew 11-fold between 2016-2017, while the next year, Alibaba deal US $ 428 million in sales during the pre-order two days before launch, 60,000 orders (40,000 fruits to 80,000 within a minute) (Tingmin, 2018). Although online purchases are becoming increasingly popular but conventional purchases are still used by Chinese consumers. This is evidenced by the demand for durian imports which does not decrease every year.

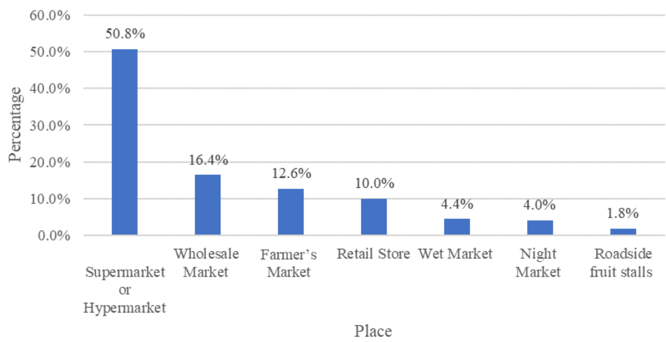

Figure 5. Place of Purchase

3.4 Perception of durian attributes

Respondents were asked to judge samples based on specific flesh attributes of Malaysian and Thailand durian. The details consist of size and shape, thickness, sweetness, colour, freshness, aroma and texture. The variety rating for each attribute can somehow be combined into a total or composite attitude towards the variety. However, perspective measured for individuals only, marketing research is most interested in predicting the choice of a large group of people. Therefore, methods of aggregating and generalizing across individuals are essential (Mat Lin, 2004).

Practically in the real market, there are differences in quality between fresh and frozen durian. As it is shorter shelf life, fresh durian should be consumed within two days once the durians are cut, and flesh removed from the husk. On the other hand, though, frozen durians can be kept for up to 18 months in -18°C in the freezer. Thailand durian with *Monthong* or *Chanee* primarily sells fresh while Malaysian with Musang King sells in pulp and whole fruit frozen. Table 4 show the result of the mean comparison in consumer perception for Malaysian and Thailand durian attributes. Overall, Malaysian and Thailand durian got scores above 3.0, indicating an excellent scale. However, the mean score for Malaysians seems higher than Thailand durian. Flesh shape, size, and thickness are below 4.0, showing no significant difference in consumers' perception among varieties. While in sweetness, colour, freshness, aroma and texture, *Musang King* variety either in whole fruit or pulp forms more acceptable than Thailand durian (mean score higher than 4.0).

Table 4. Consumer perception for Malaysian and Thailand durian attributes (n = 230)

Attribute	*Musang King* Frozen Whole	*Musang King* Frozen Pulp	*Monthong* Fresh Fruit
Size and shape	3.86	3.93	3.38
Thickness	3.90	3.90	3.48
Sweetness	4.05	4.08	3.42
Colour	4.14	3.93	3.33
Freshness	4.09	4.04	3.57
Aroma	4.08	4.12	3.44
Texture	4.04	3.93	3.45

Indicator: 1.0 – 2.0) Poor, 2.1-3.0) Fair, and 3.1-5.0) Excellent

Moreover, *Musang King* whole frozen fruit colour is the highest mean score (4.14) selected by the respondents. The colour is bright royal yellow. Therefore, even though the pulp sample is the same variety of whole fruit frozen, there is a significant difference in accepting colour attributes. The bright yellow colour is believed to degradation into light yellow without changing the taste of sweetness. *Musang King* whole frozen fruits had won consumers' perception in most attributes, followed by *Musang King* frozen pulp and *Monthong* fresh fruit. In another question, 95.2% of respondents agreed to choose *Musang King* over *Monthong* durian. They also perceived *Musang King* durian have high quality (50.4%), high in price (9.6%), suitable and able to buy anywhere and anytime (7.2%). It would say that Malaysian durian has a superior taste to its Thailand counterparts. Many sights perceived that Malaysian durian is the top taste and are known as the 'creme de la crème' of durians (Golden Moments, 2021). The popularity of Musang King or Mao Shan Wang name among Chinese consumers has beaten Thailand variety like Golden Pillow even though it's much more imported than Musang King. The maturity of Thailand's durian is different from Malaysia's durian (Derrick and Wei, 2019). Thailand's durian is harvested by cutting them at the stage when fruits are physiologically mature before dropping which does not ripen properly and substantially less flavour and taste, leading to a poor eating experience (Nur Azlin *et al.*, 2020). Differently, Malaysian durian is allowed to fully mature until the drop and emit strong and unique taste and aroma as well as nutritional content (Ho and Bhat, 2015). Therefore, to be more competitive, Malaysia has strategically positioned Musang King Durian as premium and versatile in the market. The best quality fruit, as approved by phytosanitary procedure with good packaging techniques and labelling is important for every fruit exported by Malaysia to China.

3.5 Chi-Square Test

Chi-Square test performed to determine whether there is existed any relationship between the demographic variables and overall perception towards Malaysian durian. The hypothesis tested were:

H_o : There is a significant difference in consumers' profile towards Malaysian durian perception

H_1 : There is no significant difference in consumers' profile towards Malaysian durian perception

Chi-Square values accept the null hypothesis with statistically significant at $p<0.05$. The variables of Chinese consumers' age (0.008), occupation (0.017), monthly income (individual and household) (0.000) and family members (0.022) give significant differences in Malaysian durian perception (Table 5). Age factors indicated 77.7% in the younger category and are employed (76%). Despite the health benefits of durian, young Chinese consumers mostly like the taste and its popularity. The taste of Musang King has widely known in the market as a good durian to be taken. Durian fame continues among the Chinese and the potential is endless. Hence, the aim of the marketing segment must be to consider the young generation predominantly at age 45 years and below with attractive conventional and social media advertising.

Table 5. Results of Chi-Square test on consumers profile towards Malaysian durian perception

Variable	d.f	X^2 -value
Gender	22	0.128
Age	20	0.008*
Education	10	0.437
Occupation	25	0.017*
Individual monthly income	25	0.000*
Household monthly income	25	0.000*
Family members	45	0.022*

*Significant at 5%, indicating that the characters have a significant effect on the consumer preference

In the meantime, the income level of either an individual or household depicted significant results. Musang King is considered a quite luxurious product in China, however, Chinese consumers can afford it. According to the economic forecaster, Chinese consumer spending is targeted to set more than double in 10 years, with an emphasis on private consumption including food and beverage (Evelyn, 2021). Thus, it is indicated that the greater salary will increase the purchase of expensive goods including Musang King in the future.

Other variables of family members also show significant results. Malaysian currently promoting whole fruit frozen durian or cryogenic durian. Scientifically, this technology prolongs shelf life and fruit quality comprises the taste too. One fruit weighed 1.5 to 2.0 kilograms, contains 5-6 pulps (about 300 to 500 g pulp per fruit) and is adequate to share with one or two other people. Chinese consumers intended to buy durian not only for themselves but considering for their family members. Thus, it is assumed that big family members will buy more Musang King durian for their consumption.

4. Conclusion

In conclusion, Musang King durian had a good reputation in perception and tested attributes over Thailand (Monthong) durian among Chinese consumers in the Southern part of China (Shenzen, Guangzhou and Beijing). Results discovered that durian is commonly enjoyed by the Chinese at least once times in a year. Incredibly, on average, they bought five times and could achieve 20 times in a year. Chinese consumers spend a lot of money on every durian purchase, the majority amounting to less ¥ CNY 100 (US $ 15) to 200 (US $ 32). Thus, with an expanding promotion of Malaysian durian as a premium fruit, it is predicted that demand is promising and affordable. Supermarkets and hypermarkets have been identified as the best place for selling and buying durians. Therefore, a strategic partnership agreement with selected supermarkets and hypermarkets could be the best plan in promoting the durian in China market.

All tested attributes over Thailand (Monthong) durian. 95.2% agreed that Musang King has high quality and could position as a premium fruit. However, the Chi-Square test confirmed that age, occupation, income, and family members are considered as factors influencing perception and significantly buying more Musang King durian. These factors are also important for marketing strategy in expanding market share in China. In addition, to stay ahead of the competition, promotions, and marketing of premium Musang King durian need to be strengthened to meet market needs, including growing demand in China.

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References

Anojan, V. and Subaskaran, T. (2015). Consumer's preference and consumers buying behavior on soft drinks: A case study in Northern Province of Sri Lanka. *Global Journal of Management and Business Research,* 15(2), 10-33.

Burnett, P., Kuethe, T.H. and Price, C. (2011). Consumer preference for locally grown produce: An analysis of willingness-to-pay and geographic scale. *Journal of Agriculture, Food Systems, and Community Development*, 2(1), 269-278. https://doi.org/10.5304/jafscd.2011.021.013

China Daily. (2015). Prices of Thai Durian Go Up [Press] Retrieved on February 20, 2021 from China Daily website: http://www.chinadailyasia.com/lifestyle/2015-05/05/content_15259777.htm

ChinaAg. (2017). Chinese market for Malaysian durian. Internal Commodity report-Durian. China: ChinaAg.

Chris, D. (2020). Why China loves durian, the smelly fruit popular in Thailand, Singapore and Malaysia but banned in hotels and on public transport in many countries across Asia. Retrieved on January 20, 2021 from Style Blog Website: https://www.scmp.com/magazines/style/news-trends/article/3106842/why-china-loves-durian-smelly-fruit-popular-thailand

Daxueconsulting. (2019). Supermarkets and Hypermarkets in China: A revolution yet to come. Retrieved on March 12, 2021 from Daxueconsulting Website: https://daxueconsulting.com/supermarkets-and-hypermarkets-in-china/

Derrick, A.P. and Wei, D. (2019). How China's love of durian is reshaping the Thai countryside [Press]. Retrieved on February 20, 2021 from CNA Insider Website: https://www.channelnewsasia.com/cnainsider/how-china-love-durian-reshaping-thai-countryside-monthong-musang-853556

Evelyn, C. (2021). Chinese consumer spending is set to double by 2030, Morgan Stanley predicts. Retrieved on January 21, 2021 from CNBC Website: https://

www.cnbc.com/2021/01/29/chinese-consumer-spending-to-double-by-2030-morgan-stanley-predicts.html

Federal Agricultural Marketing Authority. (2014). Export of frozen durian pulp to China. Retrieved on January 21, 2021 from http://www. fama.gov.my/en/web/pub/pengeksportan-isidurian-sejuk-beku-ke-china

Golden Moments. (2021). Top 5 most popular durian types in Singapore. Retrieved on March 9, 2021 from https://goldenmoments.sg/2021/04/top-5-most-popular-durian-types-in-singapore/

Gosh, P. (2018). 8 Things you need to know about durian fruit: The world's smelliest snack. Retrieved on January 23, 2021 from Culture Trip Blog https://theculturetrip.com/asia/singapore/articles/8-things-you-need-to-know-about-durian-the-worlds-smelliest-fruit/

Ho, L.H. and Bhat, R. (2015). Exploring the potential nutraceutical values of durian (*Durio zibethinus* L.) - An exotic tropical fruit. *Food Chemistry,* 168, 80–89. https://doi.org/10.1016/j.foodchem.2014.07.020

Hollebeek, L.D., Jaeger, S.R., Brodie, R.J. and Balemi, A. (2007). The influence of involvement on purchase intention for new world wine. *Food Quality and Preference*, 18(8), 1033-1049. https://doi.org/10.1016/j.foodqual.2007.04.007

International Trade Centre. (2020). Trade Map [Safety Data Set]. Retrieved on March 12, 2021 from https://www.trademap. org/Index.aspx

Kazmi, S.Q. (2012). Consumer perception and buying decisions (The pasta study). *International Journal of Advancements in Research and Technology*, 1(6), 11-20.

Kumar, A., Kim, Y.K. and Pelton, L. (2009). Indian consumers' purchase behavior toward US versus local brands. *International Journal of Retail and Distribution Management,* 37(6), 510-526. https://doi.org/10.1108/09590550910956241

Liu, H.H. and Wang, Y.N. (2019). Interrelationships between viral marketing and purchase intention via customer-based brand equity. *Journal of Business and Management Sciences*, 7(2), 72-83. https://doi.org/10.12691/jbms-7-2-3

Madichie, N. (2012). Consumer Perception. In Consumer Behaviour, p. 154-175. New York, USA: Tata McGraw Hill.

Mat Lin, R. (2004). Socio-economic aspect of conservation and utilization of kuini (*Mangifera odorata* Griff.) in Peninsular Malaysia. Selangor, Malaysia: Malaysian Agricultural Research and Development Institute Report.

MK Durian Harvest. (2020). Durian global market report. Retrieved on January 13, 2020 from website: http://www.plantations international.com/docs/durian-market.pdf

Nur Azlin, R., Nurul Khadijah, R., Farah Áqila, H., Siti Aisyah, A., and Wan Mohd Reza Ikhwan, W.H. Optimum storage temperature of mature drop durian (Durio Zibethinus Cv. Musang King). *International Journal of Agriculture, Forestry and Plantation,* 10, 267-273

Quintana, F. (2018). Satisfaction = Perception – expectations the best kept secret & first rule of customer service. Retrieved on March 10, 2021 from website: https://www.linkedin.com/pulse/satisfaction-perception-expectations-best-kept-secret-felipe-quintana

Robert, B.B. (2018). China's appetite for a stinky fruit booms-could durian be the next baby milk formula? [Press]. *News*. Retrieved on March 10, 2020 from ABC website: https://www.abc.net.au/news/2018-08-26/chinese-appetite-for-the-controversial-fruit-durian-booms/10143766

Safari, S., Razali, N.A., Ibrahim, W.M.W. and Rahim, M.S.A. (2021). From farm to China: A case study of Malaysian frozen whole durian export supply chain. *Economic and Technology Management Review*, 16 (1), 1-20.

Tingmin, K. (2018). China's durian craze: E-commerce giant JD's Super Durian Day smashes sales record. Retrieved on January 10, 2021 from Food Navigator Asia Website: https://www.foodnavigator-asia.com/Article/2018/06/11/China-s-durian-craze-ecommerce-giant-JD-s-Super-Durian-Day-smashes-sales-record

Varela, O., Huang, W. and Sanyang, S.E. (2009). Consumer behavior and preference in the fruit markets of Taiwan. *Agricultural Economics and Marketing Journal* 2(1), 19-28.

Wann, J.J.-W. (2001). Agribusiness Research on Marketing and Trade. Fruit Marketing System in Taiwan, presented at the Agribusiness Management towards Strengthening Agricultural Development and Trade International Symposium Chiang Mai, Thailand: Multiple Cropping Centre, Chiang Mai University, National Chung Hsing University, Ministry of Agriculture and Cooperatives, Thailand

Wu, D. (2017). Consumer preference on intrinsic quality attributes of dried mango among Chinese consumers. Wageningen, Netherlands: Wageningen University, MSc. Thesis.

